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Joint Press Release of the Dietmar Hopp Foundation and the German Cancer Research Center

May 20, 2014 (Sel)

Towards individualized cancer medicine for each patient: Dietmar Hopp Foundation will support an initiative at the National Center for Tumor Diseases (NCT) Heidelberg with €15 million

Comprehensive genome analyses of cancer cells have shown that each tumor and cancer patient are unique and need to be treated individually. To pave the way, by 2015 the National Center for Tumor Diseases (NCT) Heidelberg aims to offer cancer patients at the NCT analyses of their individual cancer genomes to be used as the basis for personalized recommendations for treatment. This initiative from the DKFZ and NCT has been made possible by generous support from the Dietmar Hopp Foundation. The long-term goal is to facilitate the transition of research findings into applications and thus make individualized cancer treatment a part of standard clinical care. Leading technology companies including SAP, Molecular Health and GATC Biotech are collaborating in the project.

The National Center for Tumor Diseases (NCT) Heidelberg was established by the DKFZ, Heidelberg University Hospital, the Medical Faculty of Heidelberg and German Cancer Aid (Deutsche Krebshilfe) and has developed into Germany's leading Comprehensive Cancer Center over the past 10 years. "Scientists from the DKFZ and the NCT have made essential contributions toward the development of individualized cancer medicine, particularly in the area of genome research," says Professor Otmar D. Wiestler, Chairman of DKFZ's Management Board. The DKFZ currently is home to the second-largest sequencing unit in Europe and is offering whole-genome sequencing of individuals' cancer cells to a growing number of patients at the NCT.

"In the future, individual differences in the molecular profile of tumors will increasingly serve as a basis for therapeutic decisions," says Professor Christof von Kalle, coordinator of NCT's board of directors. "This is the basis for a systematical development of individualized cancer medicine at the NCT and the establishment of a world-leading center in individualized cancer medicine."

By 2015, the DKFZ and Heidelberg University Hospital aim to offer individual genome sequencing that will be used to make treatment recommendations for every patient at the NCT. After initial clinical trials, the procedure will become a standard part of the care covered by a person's health insurance. "Thus, all cancer patients in our region and beyond will be given a chance to benefit from advances in individualized cancer medicine," says Dietmar Hopp. His extremely generous support for the project will amount to €15 million over the next five years. "Medical developments for the benefit of patients and their families are a major focus of my foundation's activities."

The overall aim of the project is to facilitate the transition of research findings into applications and thus make individualized cancer treatment a part of standard clinical care, at which point it should be approved and covered by health insurance companies. The DKFZ and the NCT are collaborating with leading technology companies to accelerate these developments.

GATC Biotech AG is collaborating in the project by generating genome sequencing data under certified conditions. "GATC has been a partner of the NCT for many years in the area of sequence analysis for clinical purposes," says Peter Pohl, CEO and co-founder of GATC Biotech. "Our quality standards and certifications make us a reliable partner of the NCT in its endeavors to introduce tumor profiling into standard care."

SAP AG is contributing its innovative in-memory technology SAP HANA for the real-time analysis and management of large amounts of patient data. Bernd Leukert, SAP's Application-innovation head and member of the Executive Board, states: "The SAP HANA platform has allowed us to develop applications that exactly meet the needs of the experts at the NCT Heidelberg. Together, we helped the technology leap forward with the NCT DataWareHouse, an innovative new platform for cancer research."

Molecular Health GmbH is using its software TreatmentMAP™ to carry out an individualized genomic analysis of each patient's tumor and provide an interpretation in the clinical context. The resulting recommendation will help physicians determine the best treatment. TreatmentMAP™ is the first registered medical product of its kind for individualized cancer medicine in Europe. "Cancer is a life-threatening disease whose diagnosis and treatment requires the utmost precision," says Dr. Friedrich von Bohlen, Chairman at Molecular Health. "Rapid and correct diagnosis, individual therapies and how they should be adjusted over time are essential to successfully fighting cancer. We provide information systems that swiftly help doctors make precise diagnoses and individual recommendations for treatment, at any time."

Initially, specific recommendations for treatment that are produced through this system will be issued to the physicians in charge and then will be examined in clinical trials. The first "proof of concept" trial will involve approximately 50 patients. Its aim is to ensure that data flow and interfaces used by collaborators in the project are working correctly and efficiently. A larger study involving about 1000 patients will follow, aiming to assess the clinical benefits and the potential economic impact of individualized cancer medicine.

The project will be carried out using two complementary approaches: Scientists at the DKFZ will sequence the whole genomes of cancer cells and examine them for alterations. At GATC Biotech, a selection of approximately 600 genes known to play a role in cancer will be examined for aberrations. Molecular Health's TreatmentMAP™ will interpret the results and make them comparable. "We want to find out whether there are further important alterations across the genome that not only have an impact on the onset and progression of a disease but are also relevant for treatment decisions," says von Kalle, explaining the motivation for the joint approach.

"We are pleased that the generous support for this innovative project from the Dietmar Hopp Foundation will enable us to implement our goals at the Heidelberg site in the near future," says Otmar D. Wiestler. "We are very grateful to Dietmar Hopp, whose support will help us provide access to customized therapy for tumor patients in the Metropolitan Region Rhine-Neckar and also throughout Germany, through the German Cancer Consortium (DKTK)."

The Dietmar Hopp Foundation was founded in 1995 in order to support and sponsor the implementation of ambitious, not-for-profit projects. The majority of the foundation's assets consists of SAP shares contributed by Dietmar Hopp from his private property. Up until today, the Dietmar Hopp Foundation, as one of the largest foundations in Europe, has distributed some €375 million. The main activities focus on the Rhine Neckar Metropolitan Region, to which Dietmar Hopp feels very connected and grateful: „Here is where I was born and where I found the key to my success. And I consider it a pleasant duty to show my gratitude and give some of this back to my home region". The foundation's aim is to support and sponsor projects in the four areas of Sport, Medicine, Education and Social Affairs, whereby the focus is on youth sport sponsoring. The background for this orientation is Dietmar Hopp's personal experience concerning the positive effect of sport on his development as a youngster. The second focus is on sponsoring medical research projects at top level, e.g. in the areas of cancer research and paediatrics. While Social Affairs concentrates on the needs of the older generation, the Education segment supports and sponsors institutions for young people – from kindergartens to universities. Corresponding

applications can be submitted to the foundation's office in St. Leon-Rot. The sponsoring criteria are available for download on the website of the Dietmar Hopp Foundation. The Dietmar Hopp Stiftung is member of the Bundesverband Deutscher Stiftungen, the Verein Zukunft Metropolregion Rhein-Neckar as well as the Sportregion Rhein-Neckar e.V.

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The German Cancer Research Center (Deutsches Krebsforschungszentrum, DKFZ) with its more than 2,500 employees is the largest biomedical research institute in Germany. At DKFZ, more than 1,000 scientists investigate how cancer develops, identify cancer risk factors and endeavor to find new strategies to prevent people from getting cancer. They develop novel approaches to make tumor diagnosis more precise and treatment of cancer patients more successful. The staff of the Cancer Information Service (KID) offers information about the widespread disease of cancer for patients, their families, and the general public. Jointly with Heidelberg University Hospital, DKFZ has established the National Center for Tumor Diseases (NCT) Heidelberg, where promising approaches from cancer research are translated into the clinic. In the German Consortium for Translational Cancer Research (DKTK), one of six German Centers for Health Research, DKFZ maintains translational centers at seven university partnering sites. Combining excellent university hospitals with high-profile research at a Helmholtz Center is an important contribution to improving the chances of cancer patients. DKFZ is a member of the Helmholtz Association of National Research Centers, with ninety percent of its funding coming from the German Federal Ministry of Education and Research and the remaining ten percent from the State of Baden-Württemberg.

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